Things you should know about FERTILIZERS

ESSENTIALS

Four elements may be considered as necessary foods for plant life:—Nitrogen—Phosphates—Potash—Lime. The presence of these in the soil, in properly balanced proportions, is the object aimed at in manuring.

LIME

An essential to the correct action of the other three, and whilst not primarily a manure, its presence is of paramount importance. Generally speaking, sour ground is short of lime. Its absence is often indicated by the occurrence of finger and toe disease among the cabbage family. To test for lime, put a little thoroughly dried soil into a bottle, and add a little Spirits of Salts. If there is little or no effervescence, lime is needed in the soil. It may be added in the form of ground lime, lump lime, nitro-chalk, chalk marl, etc., at the rate of 1-lb. to two square yards

NITROGEN

Stimulates growth of leaf and stem, and promotes vigorous development above ground. Essential therefore for early growth of all plants, for establishing wood in fruit trees, and in cases where the main growth is foliage, as in cabbages, etc. Certain crops of the pea and bean families have special methods of obtaining nitrogen from the air, and do not usually need artificial help in this direction.

MANURES SUPPLYING NITROGEN.

Nitrate of Ammonia, Nitrate of Soda, Nitrate of Lime, Nitrate of Potash, Nitro-Chalk, Sulphate of Ammonia, Soot, Nitrolim, Blood, Dried Blood, Hoof and Horn, Leather, Shoddy, Wool Waste, Hair and Feathers.

PHOSPHATES

More particularly concerned with the bringing to maturity of the plant, hence of help in producing fruits, seeds and roots. Such crops as turnips, carrots, parsnips, also fruit trees, need full supplies of this element.

MANURES SUPPLYING PHOSPHATES.

Guano, Ammoniated Guano, Dried Fish Guano, Bones, Bones Dissolved, Bone Ash, Bone Meal, Bone Black, Mineral Phosphates, Superphosphate of Lime and Basic Slag.

POTASH

Involved in the manufacture of sugar and starch in such crops as potatoes, carrots, beetroot. Gives "tone" to crops, enabling them to resist fungoid and other diseases. Of use in cases where too much wood or leaf is produced, tending to restore the balance of growth.

MANURES SUPPLYING POTASH.

Sulphate of Potash, Kainit, Carbonate of Potash, Wood Ashes, Muriate of Potash.

THE IMPORTANCE OF BALANCED AND COMPLETE MANURING

In the light of the above remarks, it will be possible to decide more or less accurately what constituents are required in each particular case. The aim always being to provide those elements which the crop appears to need, in the correct proportions and under proper conditions.

THE IMPORTANCE OF HUMUS

Whatever artificial manuring is done, dung should be applied to the ground whenever available. By this means the valuable natural 'humus' is increased, providing a medium in which root growth luxuriates. The best substitute for dung is probably 'spent' hops which should be used if obtainable. Clean garden refuse, with suitable treatment, yields a satisfactory humus for the garden. The heap should be built up in layers, applying lime to each layer in succession and watering with a solution of sulphate of ammonia.

THINGS YOU SHOULD KNOW ABOUT FERTILIZERS

(continued).

Alternatively, a layer of mixed refuse, 9 ins. deep, may be sprinkled with a 'converter,' such as Calcium Cyanamide or 'Adco,' and further 9 in. layers laid on with similar treatment. Keep thoroughly moist with water. In nine or ten weeks the heap will be converted into suitable manure. Hard woody material, and any diseased plant or wood must, of course, be burnt.

(A handbook giving fuller instructions is available on request.)

SPECIAL POINTS TO REMEMBER

Use artificial manures judiciously. Plants, through their cell tissues, take up infinitely small amounts of these elements, and over manuring is useless and wasteful.

Make sure your land is not short of lime. It is essential for the action of artificial manures. (See page two for method of testing.)

Nitrate of Soda or Nitrate of Lime should not be mixed with Superphosphate of Lime, unless it is to be used immediately.

Sulphate of Ammonia should on no account be mixed with Basic Slag or Lime.

Generally, the mixing of manures freshly for each application is recommended.

The Year Round
IN YOUR GARDEN

January
Dig ground not turned up in autumn, and protect plants from frost by covering of straw. When weather is suitable sow first crop of peas, beans, radishes, etc., in warm position. Persevere with the destruction of weeds and vermin in the garden.

February
Sow beans, peas, cabbages, carrots and turnips for early crops. Earth up winter greens. Plant strawberries about the end of the month. February is an ideal month for propagating dahlias. Transplant hardy biennials and herbaceous plants.

March
Sow main crops of peas, beans, cabbages, onions, leeks, carrots, parsnips, Brussels sprouts, lettuce and spinach. Flowers should be protected and trees pruned in this month. Cabbages should be planted out. Sow hardy annuals in borders. Lay turf-edgings and attend to gravel walks.

April
Sow asparagus, onions and carrots in heavy soils. This is the month to sow main or successive crops of all kinds. Stake up peas; hoe and thin spinach, onions, parsnips, etc. Towards the end of the month sow beet, broccoli and kidney beans. Sow main annuals, half-hardy annuals, etc. Biennials and perennials should be sown before the end of the month. Plant out gladioli and stocks; repair lawns, lay new turf and sow grass seed. Mow frequently.

May
Remove all superfluous shoots and blossoms and prune fruit trees. Sow kidney beans in the first week, and scarlet-runners in the last fortnight; also beet, radishes and lettuce. Sow beans, cauliflower and Brussels sprouts for late crop. During the last week plant out dahlias, stocks and calceolarias.

June
Sow kidney beans for succession; plant out savoys and Brussels sprouts. Sow principal crops of turnips about the third week. Propagate sweet williams, wallflowers, etc. Plant out dahlias if there is no risk of frost.

July
Give close attention to insects and useless growths; stake scarlet-runners and peas, and thin gooseberry and raspberry bushes. In the last week plant late crops of broccoli and cauliflower, and gather and dry all kinds of herbs for seasoning, etc.

August
Gather and store ripe fruit, clear away decayed annuals, and sow parsley, cabbages and winter onions; also cauliflower, lettuce and radishes for winter. Sow seeds of snapdragon, delphinium and second sowing of hardy annuals for planting in spring.

September
Dig up carrots, beetroot, potatoes, etc., and store. Sow mignonette, primula and half-hardy annuals for early flowering. Prune fruit trees that have finished bearing; remove pot plants to winter quarters. Protect herbaceous plants.

October
Earth up savoys and cabbages as high as the leaves. Prune honeysuckle, roses and other flowering shrubs. Take cuttings of roses, calceolarias, violas, etc. Transplant polyanthus, and cuttings of evergreens. Towards the end of the month begin planting tulips, etc.

November
Trench up ground as cleared, leaving the surface rough. Sow early beans and peas in warm borders; earth up celery. Prune and plant bushes and fruit trees. This is the best month for planting roses and flowering shrubs.

December
Collect and burn vegetable refuse. Dig, manure and trench vacant ground when the weather is sufficiently dry. Plant shrubs, spray and roll lawns, and repair gravel walks.

EVERYTHING FOR Timothy Whites & Taylors HOUSEHOLD STORES YOUR GARDEN

FOR ALL GARDEN CROPS.

"UNIVERSAL" FERTILIZER.

"UNIVERSAL" FERTILIZER is a scientific compound, and is meeting with an ever-increasing demand, as it is a very high quality general garden fertilizer at an attractive price.

Use "UNIVERSAL" FERTILIZER in your garden and get better results with BEDDING PLANTS, POT PLANTS, ROSE TREES, HERBACEOUS BORDERS, FRUIT BUSHES, FRUIT TREES, VINES, STRAWBERRIES, VEGETABLES, etc., etc.

"UNIVERSAL" is the all-purpose fertilizer.

3D *per lb.*

7 lb. **1/6.** 28 lb. **5/6.** 56 lb. **10/9.** 112 lb. **21/-.**

FOR LAWNS.

Timothys

FAMOUS

GRASS FERTILIZER.

Regular use of this Grass Fertilizer will greatly improve the condition of your lawns, giving a richness and vitality to the turf and a noticeable deepening of colour.

It is most inexpensive to use, the recommended rate of application being 2-ozs. to the square yard (equivalent to approx. 5-cwt. to the acre).

For one dressing of the average garden lawn (approx. 20′x30′) 8-9-lbs. will be found sufficient.

Timothys Grass Fertilizer should be applied in the Spring and the Autumn when the grass is in full growth, but the application of half or quarter doses during the Summer months is advisable if best results are desired.

3D *per lb.*

7 lb. **1/6.** 28 lb. **5/6.** 56 lb. **10/9.** 112 lb. **21/-.**

HERE'S HOW TO RID YOUR LAWN OF WORMS.

Timothys

WORM KILLER.

NO MORE WORMS MEANS NO MORE WORM-CASTS!

Here is a very simple method of ridding your lawn of the worm pest—you will keep your lawn entirely free of worms if you use Timothys Worm Killer three or four times a year.

After the turf has been left unrolled for several days and the worms have opened up their runs, Timothys Worm Killer should be applied at the rate of ½-lb. to the square yard and watered in immediately The effect is instantaneous! The worms will *come to the surface* in huge quantities and die.
Full directions for use are given with every purchase.

PER LB. **2½D**

7-lbs. **1/3** ; 28-lbs. **4/9** ; 56-lbs. **9/-** ; 112-lbs. **17/6.**

WHAT TO USE

A useful table showing the correct fertilizers for various crops.

Whenever Superphosphate appears in a formula in the following table, Basic Slag may be substituted in the proportion of 4 parts for 3 parts of Superphosphate, except where Sulphate of Ammonia also appears, in which case it should not be mixed, but applied separately.

In preparing and applying manures, the addition of sand is often of value in helping to divide and mix the manures and to make it easier to spread evenly over the area.

CROP	FERTILIZER
ASPARAGUS	Apply broadcast in early Spring, Superphosphate and Kainit, in equal weights, well mixed, at rate of 4-oz. per square yard. When in leaf, Nitrate of Soda 1-oz. to the square yard.
BEANS	*(See Peas.)*
BEETROOT	Apply at sowing time at the rate of 4-oz. to the square yard, 4-lbs. Kainit and 3-lbs. Superphosphate, well mixed. As top dressing later on: Nitrate of Soda 1-oz. to the square yard.
CABBAGE FAMILY	Superphosphate 3-lbs., Sulphate of Potash ¾-lb. Mix well. Apply at planting time, 2-oz. to 1 square yard. During growth, as a top dressing, Nitrate of Soda or Sulphate of Ammonia, 1-oz. to the square yard.
CARROTS	*(See Root Crops.)*
CELERY	Apply before planting, in the trench, equal parts of Superphosphate and Kainit, at the rate of 3-oz. to the square yard. Afterwards, a top dressing as required of Nitrate of Soda, 1-oz. to 2 square yards, watered in.
FLOWERS *(General)*	Good general formula: 1-lb. Sulphate of Potash, 1-lb. Sulphate of Ammonia, 1-lb. Bone Meal, 2-lbs. Superphosphate. Apply as a top dressing in Spring and Summer at 2-oz. per square yard.
FRUIT TREES	Winter dressing: 2-lbs. Basic Slag, 2-lbs. Bone Meal, 1-lb. Sulphate of Potash. Mix and apply 3-oz. to the square yard. Spring dressing: 1-lb. Bone Meal, 2-lbs. Superphosphate, 1-lb. Sulphate of Potash, 1-lb. Sulphate of Ammonia. Mix well and apply 3-oz. to the square yard.
GRASS	Winter dressing: Equal parts of Superphosphate and Kainit well mixed, and broadcast at the rate of 3-oz. to the square yard. Spring dressing: 1-lb. Sulphate of Ammonia, 3-lbs. Superphosphate, 1-lb. Sulphate of Potash. Should be mixed well with a proportion of sand to aid even application. 3-oz. of the mixed fertilizers to the square yard.
HERBACEOUS BORDERS	When preparing the ground for planting, dig in the following mixture. 4-lbs. Bone Meal, 1-lb. Sulphate of Potash. Apply 5-oz. to the square yard.